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EXHIBIT B

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February 28, 2008

Mr. Eric G. Zajac  
Zajac & Arial  
1818 Market Street, 30<sup>th</sup> Floor  
Philadelphia, PA 19103

Re: Gilvary vs. General Motors Corp. et al.

Dear Mr. Zajac:

You requested a report of my analyses and opinions regarding the human factors and warnings issues associated with the Gilvary vs. General Motors Corp. et al. case. This letter is my report. I reserve the right to amend this report should additional relevant information become available.

**Qualifications and Bases For Opinions**

My analyses and opinions are based on my education, training and experience, my review of relevant materials in the case, and a substantial body of scientific, peer-reviewed, published empirical research.

Following is a summary of some of my relevant background and qualifications.

Regarding my education, I received a Bachelor of Science degree in Metallurgical Engineering in 1957, a Masters of Science in Psychology in 1959, and a Ph.D. in Psychology in 1961. All three degrees are from Carnegie-Mellon University.

Regarding employment, while on active military duty during 1962-1963, I worked as a Research Psychologist at the US Army Human Engineering Laboratories at Aberdeen Proving Ground, Maryland. From 1963 through 1972 I was on the faculty at the State University of New York at Buffalo where I held a joint appointment in the Departments of Psychology and Industrial Engineering. While on sabbatical leave from Buffalo, I was a Visiting Professor at the University of Sussex in England during 1969-1970. Also while at Buffalo, I was Chair of the Industrial Engineering Department in 1967-1969. In 1972 I became Professor and Chair of the Psychology Department at the University of Houston, where I remained until 1984. In 1984 I joined the faculty at Rice University as an Endowed Chair Professor of Psychology. I was Chair of the Psychology Department at Rice from 1987 through 1990. I retired from Rice in 2002, and I currently have the title of Emeritus Professor. In recent years my teaching

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responsibilities included graduate and undergraduate courses in human factors and ergonomics, human factors methodology, human reliability and safety.

I am a certified Human Factors Professional. I have been President of the national Human Factors and Ergonomics Society. Over the years I have participated in research funded through an assortment of grants and contracts, including contracts funded by a number of industrial corporations. I have evaluated and published research on topics including the design and effectiveness of instructions, warnings and labels as well as research involving industrial accident analysis.

I have edited/authored three books on warnings and a book on information technology. My research has been published in peer-reviewed journals, and I have authored or co-authored over 140 articles. Some of the relevant peer-reviewed publications include:

- Wogalter, M.S., DeJoy, D.M. and Laughery, K.R. (Eds.) Warnings and Risk Communication. London, Taylor & Francis, 1999.
- Wogalter, M.S. and Laughery, K.R. Warnings and hazard communications. In Salvendy (Ed.), Handbook of Human Factors and Ergonomics, Third Edition. New York, Wiley, 2006, 889-911.
- \* Laughery, K.R. Safety communications: Warnings. Applied Ergonomics. 2006, 37, 467-478.
- Laughery, K.R. and Paige-Smith, D. Explicit information in warnings. In Wogalter, M.S. (Ed.) Handbook of Warnings, Mahwah, New Jersey, Erlbaum, 2006, 419-428.
- Laughery, K.R. and Wogalter, M.S. Designing Effective Warnings. In Williges (Ed.), Reviews of Human Factors and Ergonomics, Volume 2. Santa Monica, Human Factors and Ergonomics Society, 2006, 241-271.

A list of other articles and technical reports is in my Curriculum Vitae -- a copy of which is attached. I have offered expert testimony in various state and federal courts throughout the country on issues within my field of expertise.

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My analysis in this case has included a review of the following materials:

- GM's supplemental response to Requests to Produce Documents provided in response to Court Order
- Carfax report for subject vehicle
- Title History of subject vehicle
- Police Report
- Owner's Manual for subject vehicle
- Accident reconstruction report of Lawrence Wilson.
- Depositions of:
  - Patrick Gilvary
  - Sarajuan Gilvary
  - James Gavin
  - Ronald Ostrowski
  - Andrew Ruddy
  - George Spangenberg
  - Marilee Spangenberg
  - Carol White

Laughery, K.R., Paige, D.L., Laughery, B.R., Wogalter, M.S., Kalsher, M.J. and Leonard, S.D. (2002). Guidelines for warnings design: Do they matter? *Proceedings of the Human Factors and Ergonomics Society 46<sup>th</sup> Annual Meeting*, Baltimore, 1708-1712.

Laughery, K.R. and Paige, D.L. Warnings research: A methodological analysis of rating procedures. *Proceedings of the XVth Triennial Congress of the International Ergonomics Association*, Seoul, Korea, August, 2003.

Paige, D.L. and Laughery, K.R. Risk perception: The effects of technical knowledge - or lack of it. *Proceedings of the XVth Triennial Congress of the International Ergonomics Association*, Seoul, Korea, August, 2003.

Rhoades, T.P. and Wisniewski, E.C. (2004). Judgments of risk associated with riding with a reclined seat in an automobile. *Proceedings of the Human Factors and Ergonomics Society 48<sup>th</sup> Annual Meeting*, New Orleans, 1136-1139.

Leonard, S.D. and Karnes, E.W. (1998) Perception of risk in automobiles: Is it accurate? *Proceedings of the Human Factors and Ergonomics Society 42<sup>nd</sup> Annual Meeting*, Chicago, 1083-1087.

Bason, J.J. (2000). Reclining Seat Back Survey. Survey Research Center, The University of Georgia.

Leonard, S.D. and Karnes, E.W. (2000). Compatibility of safety and comfort in vehicles. *Proceedings of the International Ergonomics Association 2000/ Human Factors and Ergonomics Society 2000 Congress*, San Diego, 3.357-3-360.

Mehlenbacher, B., Wogalter, M.S. and Laughery, K.R. (2002). On the reading of product owner's manuals: Perceptions and product complexity. *Proceedings of the Human Factors and Ergonomics Society 46<sup>th</sup> Annual Meeting*, Baltimore, 730-734.

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Cowley, J.A., Kim, S. and Wogalter, M.S. (2006). People do not identify tire aging as a safety hazard. *Proceedings of the Human Factors and Ergonomics Society 50<sup>th</sup> Annual Meeting*, San Francisco, 860-864.

Frantz, J.P. (1994). Effect of location and procedural explicitness on user processing of and compliance with product warnings. *Human Factors*, 36, 532-546.

Thyer, B.A. and Geller, E.S. (1987). The “buckle-up” dashboard sticker: An effective environmental intervention for safety belt promotion. *Environment and Behavior*, 19, 484-494.

National Transportation Safety Board Safety Recommendation. Dated 5/10/88.  
ANSI Z535.4-1991 Product Safety Signs and Labels

### **Understanding and Assumptions**

Based on the above review and analysis, I have the following understanding and/or assumptions regarding the incident:

1. On April 16, 2005 at approximately 7:18am, Richard Gross was driving his 1995 Buick Regal southbound on Hwy-309. Sarajuan Gilvary was a passenger in the right front seat. Mr. Gross and Ms. Gilvary had worked through the night cleaning Grotto Pizza, a facility that was part of Mr. Gross’s cleaning business. While driving, Mr. Gross fell asleep and lost control of the vehicle. The Buick rolled, passenger’s side leading. Ms. Gilvary was severely injured.
2. At the time of the accident, Ms. Gilvary was asleep with her seatback fully reclined. She was ejected from the front passenger seat towards the rear, and she ended in the rear seat partially ejected through the rear passenger side door.
3. The speed limit on the highway was 55 mph. Mr. Gross was traveling at approximately the speed limit.
4. It is uncertain whether Ms. Gilvary had her seat belt engaged.
5. Promotional materials for General Motors vehicles, including the 1995 Buick Regal, emphasize the seat recline as a comfort feature.
6. Prior to manufacturing the subject 1995 vehicle, General Motors Corporation was aware of the hazards and consequences associated with reclining the seat back while the vehicle is moving.

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7. A warning addressing the hazards associated with reclining the seat back while the vehicle is moving was present in the vehicle Owner's Manual. There was no on-vehicle warning addressing these hazards.

## **Opinions**

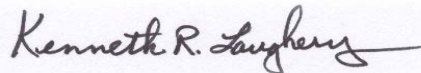
Based on my review of the materials and the above understanding and/or assumptions, I have the following opinions:

1. The seat recline is a comfort feature that functions as an invitation for the occupant to recline the seat.
2. The hazards associated with reclining the seat back while the vehicle is moving are not open and obvious. These hazards are essentially technical in nature, having to do with issues such as kinematics, biomechanics and forces, and they cannot be expected to be known or discoverable by the average consumer. Thus, it is imperative that an adequate warning system be provided.
3. The restraint system in the subject vehicle is defective due to the lack of an adequate warning system regarding the hazards associated with riding with the seat back reclined. The warning system is inadequate because:
  - a) The information in the Owner's Manual has poor attention-getting characteristics. It is embedded in a document consisting of 326 pages. Further, it is well established that the vast majority of vehicle owners do not read owner's manuals; rather, they scan or browse them and then use them primarily as a reference document when specific information is needed. Thus, it is likely that warnings in the Owner's Manual regarding the hazards associated with the seat back reclined while the vehicle is moving will not be seen, and a warning system that is limited to information in the Owner's Manual is inadequate.
  - b) The most critical component of such a warning system is an on-product warning. A good warning explicitly addressing the hazards, potential consequences, and instructions associated with riding with the seat back reclined should have been on the vehicle. There was no such warning information on the vehicle.

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4. The attached exemplar warning is an example of an on-product warning addressing the hazards associated with riding with the seat back reclined. It employs a pictorial, color and a signal word to attract attention. It provides explicit information regarding the hazard, the consequences and proper instructions. This exemplar meets the ANSI Z535.4 Standard for product warnings, which is applicable to vehicles. Also, a temporary label such as this exemplar should have been placed on the dash when the vehicle was new.
5. Warnings containing explicit information regarding the hazards, potential consequences and instructions associated with riding with the seat back reclined provide motivation that results in higher levels of compliance. Hence, it is critical that such warning information be communicated to the user.
6. The warning system could also contain additional components that would contribute to its effectiveness. A back-lit reminder statement in the dash on the passenger side stating KEEP SEAT BACK UPRIGHT that is lit when the seat back is reclined would be an effective reminder to the passenger. An auditory signal that activates when the seat back is reclined would also be an effective reminder. Also, warning information addressing this issue could be provided to the purchaser of the vehicle at the point of sale.

Sincerely,

A handwritten signature in black ink, reading "Kenneth R. Laughery". The signature is fluid and cursive, with a long horizontal stroke at the end.

Kenneth R. Laughery, Ph.D.

## EXEMPLAR WARNING







By: Eric G. Zajac, Esquire  
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COUNSEL FOR: PLAINTIFF

|                                   |   |                        |
|-----------------------------------|---|------------------------|
| <b>SARAH GILVARY</b>              | : | COURT OF COMMON PLEAS  |
|                                   | : | OF PHILADELPHIA COUNTY |
| Plaintiff,                        | : |                        |
| v.                                | : | March Term, 2007       |
|                                   | : |                        |
| <b>GENERAL MOTORS CORPORATION</b> | : | No. 3736               |
| and <b>POMPEY DODGE, INC.,</b>    | : |                        |
|                                   | : | JURY TRIAL DEMANDED    |
| Defendants.                       | : |                        |

**RESPONSES OF PLAINTIFF, SARAH GILVARY, TO INTERROGATORIES (SET III)  
OF DEFENDANT, GENERAL MOTORS CORPORATION**

1. Identify each person whom you expect to call as an expert witness, at the trial of this action to testify.

**William H. Muzzy, III, B.S.**  
**1509 Porter Ave.**  
**Ocean Springs, MS 39564**

- a. as to each person so identified, state the subject matter on which the expert is expected to testify.

**Mr. Muzzy is a mechanical engineer with expertise in injury mechanics, occupant motion, and restraint systems. Mr. Muzzy has researched and developed restraint systems. He was involved in designing, building, and operating a crash injury research facility that examined the effects of acceleration and deceleration on the human body at the Naval Biodynamics Laboratories (NBL) as chief engineer. The tests performed at the NBL used the same type restraint system automotive companies have to test components of their restraint systems. Mr. Muzzy has designed restraint systems for various types of crashes.**

**It is expected that the subject matter which Mr. Muzzy will testify to is the defective design of the reclining seat mechanism of the subject vehicle, especially in light of the risks associated with reclining the front passenger seat, or sleeping, while the vehicle is in motion. This defective design includes, but is not limited to, allowing the front passenger seat to recline more than 30 degrees while the vehicle is in motion, and the ineffectiveness of the design in reducing injury associated with reclining the front passenger seat, or sleeping, while the vehicle is in motion. He will also address the relationship between Ms. Gilvary's injuries and the restraint system of the subject vehicle.**

2. As to each expert identified above, have him state the following and sign his answers:
  - a. the substance of the facts and opinions to which he is expected to testify;

**Mr. Muzzy will testify that the seat design is defective because it can be reclined more than 30 degrees while the vehicle is in motion. He will testify as to the causal relationship between the seat-back being reclined and the injuries. He will testify that there would have been no serious injury if the seatback were in the upright position, including the head and neck reaction to a head and neck acceleration. He will offer alternative feasible designs that would allow the seat to be reclined under appropriate circumstances without impairing the utility of the seat or materially increasing its cost of production.**

- b. a summary of the grounds for each opinion.

**The grounds upon which Mr. Muzzy will base his opinions may or may not rely upon studies, tests or surveys. He may rely on documents on restraint performance and reclined seats, including technical papers, govt reports and patents. These materials contain test results and discussions of belt performance related to seat orientation, seatbelt "misuse" in the context of reclined seats, and alternative belt designs that address seat recline. The patents present a variety of technologies that can be -- or have been -- applied to reclined seats, including interlock systems that prevent vehicle use when seats are reclined, crash systems that move seats to an upright position prior to impact, and seatbacks that move in conjunction with the seat cushion angle when reclining.**

**However, Mr. Muzzy has relied upon a substantial body of evidence in support of his opinions regarding seat design, including, but not limited to:**

- 1964, Dynamic Research of Passenger Restraining Devices, 1964 STAPP Car Crash Conference;

- 1975, Motion Sequence Criteria and Design Proposals for Restraint Devices in Order to Avoid Unfavorable Biomechanic Conditions and Submarining, SAE 751146;
- Sept., 1975, United States Patent, No. 3907361, "Control Means for the Position of a Vehicle Seat";
- Oct., 1976, Designing Safer Seats, Automotive Engineering, An SAE publication;
- May, 1983, United States Patent, No. 4384743, "Adjustable Stop Assembly for Limiting the Recline Angle of a Seat Back."
- 1984, Seat Belt Improvements, DeRosa, D; Larssonneur, JF, Renault Technical Center, SAE 840506;
- February, 1984, Anatomical Geometry and Seating, SAE 840400;
- Sept., 1986, "Misuse of three-point occupant restraints in real-world collisions," Green, R., German, A., University of Western Ontario; Dance, M., Transport Canada; SAE 1987-13-0008;
- March 25, 1987, Public Forum on Occupant Restraints, Transport Canada;
- United States Patent, No. 4659108, "Automatic Seat Belt Adjusting System., Inventor - John J. Sack; Nazareth Stamboulia; Akira Tanaka / Assignee - American Safety Equipment Corporation
- March 01, 1988, Performance of Lap/Shoulder Belts in 167 Motor Vehicle Crashes, Volume 1, NTSB;
- Performance of Lap/Shoulder Belts in 167 Motor Vehicle Crashes, Volume 2, NTSB;
- May 10, 1988, H88-9: Seatbelt Safety Recommendation to NHTSA; Burnett, Jim, NTSB;
- August 2, 1988, Letter from Diane K. Steed, Administrator, NHTSA, to Jim Burnett, Chair, NTSB;
- 19890301; Letter from James L. Kolstad, Acting Chair, NTSB, to Diane K. Steed, Administrator, NHTSA, Kolstad, J. L.
- 19890724, Letter from Jeffrey R. Miller, Acting Administrator, NHTSA, to James L. Kolstad, Acting Chair, NTSB, Miller, J. R., NHTSA;
- 19910900, Seat Belts and Reclining Seats, Jeffrey, RS and Cook, PL, Injury, 1991;
- 19911008, U.S. Patent No. 5055824, "System for Warning an Effective Restraint Limit of a Seat Belt," Inventor - Tetsuya Hamaue, assignee Takata;
- 19940517, U.S. Patent No. 5311962, "Seat Reclining Mechanism and Shift Lever Inventor Interlock System."- Nobuyuki Nakano; Takuya Tomike / Assignee - Ikeda Bussan Company Ltd
- 19950518, United States Patent, No. 5407244, "Safety Seat and Safety Arrangement of Seats." Inventor - Nobuyuki Nakano; Nobuhiko Takahashi / Assignee - Ikeda Bussan Company Ltd;
- 19950620, United States Patent, No. 5425568, "Van-Type Vehicle Seat with a Seatback-Mounted Armrest." Inventor - Thomas C. Sliney; James R. Abel / Assignee - General Motors, Corporation;
- 20030527, U.S. Patent No. 6568756, "Foldable Vehicle Seat."

- 19980505, United States Patent, No. 5746478, "Reclining Mechanism and Latch for Child Safety Seat. Inventor - Michael Andrew Lumley; Wieslaw Peter Maciejczyk / Assignee - Britax Child-Care Products Pty Ltd
- 19980602, United States Patent, No. 5758544, "System and Method for Locking Out An Output Device When an Input Device is Actuated," Inventor - Jimmy Lee / Assignee - P.L Porter Company
- 20011200, "Seat Belt and Car Seat in a Reclined Position: A Dangerous Combination, Rehm," C. G., Goldman, R. K, Journal of Trauma, 51(6), 1189-1191.
- 20020122, United States Patent, No.6340209, "Vehicle Body Acceleration Sensor for Seat Belts," Inventor - Kazuo Yamamoto; Yoshito Hashimoto; Masanao Fukunaga / Assignee - Fuji Kiko Company;
- 20030000, "Reclining Seats Trade Safety for Comfort," Emison, J.K., Trial: Journal of the Association of Trial Lawyers of America, volume 39, issue 2;
- 2003, May 27, U.S. Patent No. 6568756, Foldable Vehicle Seat," Inventor - Kunihiisa Sugimoto; Shuichi Sugano / Assignee - Fuji Kiko Company, ltd.
- 1990, Assessing the Safety Performance of Occupant, Restraint Systems, Viano, DC; Arepally, S, General Motors;
- 19950620 Armrest." Corporation angular movement of the seatback during excessive deceleration. Trademark Office;SRS, Inc. 2008-06-19 4 Reclined Vehicle Seats Technical Papers and Patents Addressing Relevant Safety Issues 20030527 6568756, "Foldable Vehicle Seat." Ltd. to danger." Trademark Office SRS, Inc. 2008-06-19 5 Reclined Vehicle Seats Technical Papers and Patents Addressing Relevant Safety Issues 20070907 back the front seat—don't do it! Bazelon, E. between the NTSB and NHTSA on the issue. Slate SRS, Inc. 2008-06-19 6
- 20070907 ."Death Nap: The dangers of tilting back the front seat—don't do it! Bazelon, E., Slate;
- 2003, November 10, 75,000 units of PRE-SAFE predictive occupant protection system already in use. DaimlerChrysler Press;
- 20040302; U.S. Patent No. 6698837, "Seat Assembly with Integrated Recliner and Floor- Latch Mechanism." Inventor - Srinivas Pejathaya; Jeffrey T. Bonk / Assignee - Fisher Dynamics;
- 20041130, United States Patent, No. 6824216, "Seat Reclining Mechanisms." Inventor - Hideki Uramichi / Assignee Araco Kabushiki Kaish;
- 20050322; United States Patent, No.6871120, "Device for Actuating a Seat Element and Seat Comprising It," Inventor Laurent Nivet / Assignee Labinal;
- Sept 10, 1996, U.S. Patent No. 5,553,924, vehicle safety seat system in passenger vehicles, inventor Muzzy.

**Additional grounds upon which Mr. Muzzy will base his opinions may be provided.**

3. With respect to each expert identified in answer to the preceding interrogatory, state the following:

- a. a brief chronological resume of the expert's education and professional background, including associations or societies of which he (she) is a member, schools attended, including years of attendance and degrees received, experience in particular fields, including names and addresses of employers with inclusive years of employment;

**See attached curriculum vitae.**

- b. the title, publisher, date and form of all documentary material published by the expert.

**See attached curriculum vitae.**

4. Identify any documents prepared or generated by the expert which in whole or in part contain the facts and opinions to which the expert is expected to testify, for whom prepared and when and identify further each person to whom the document or documents were given or distributed.

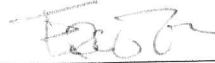
**As of this writing, Mr. Muzzy has not “prepared or generated” any documents specific to this case because Defendant General Motors has just complied with a Court Order requiring it to produce, among other items, all warnings provided to users of the subject vehicle, regarding the risks associated with reclining the front passenger seat while the vehicle is in motion.**

5. Identify all factual information supplied to the expert which was used as the basis for his opinion including correspondence, memoranda, reports, tests, plans, specifications, drawings and/or documents of any kind as well as objects and photographs examined.

**Specific to this case, Mr. Muzzy reviewed:**

- **GM’s supplemental response to Requests to Produce Documents provided in response to Court Order,**
- **Carfax report for subject vehicle,**
- **Title History of subject vehicle,**
- **Police Report,**
- **Deposition of Patrick Gilvary,**
- **Deposition of Sarajuan Gilvary,**
- **Deposition of Gavin,**
- **Deposition of Ostrowski,**
- **Deposition of Ruddy,**
- **Deposition of G. Spangenberg,**
- **Deposition of M. Spangenberg,**
- **Deposition of White,**
- **Owner’s Manual for subject vehicle, and**
- **Accident reconstruction report of Lawrence Wilson.**

**ZAJAC & ARIAS, LLC**



BY: **Eric G. Zajac, Esquire**  
Attorney for Plaintiff

DATED: February 9, 2009